

Appl. No.: 10/647,488
Amdt. Dated August 23, 2006
Reply to Office Action of February 23, 2006

Amendments to the Drawings

The attached one (1) sheet of drawings that includes Figure 1 will replace the sheet of drawings as originally filed. On the one (1) enclosed replacement sheet that includes Figure 1, element 1 has been deleted.

The other objections to the Drawings (items b. through e.) have been corrected by the amendments to the specification as set forth elsewhere in this Response.

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REMARKS

Applicant thanks the Examiner for pointing out the defect in the Oath and will submit a newly executed Declaration as soon as possible.

The Specification has been amended to correct for the misspellings and inexact terms identified by the Examiner as items f-h, in paragraph 2 of the Official Action as follows:

- The paragraph on page 1, lines 16-24 is amended to describe a “spinal cord injury”
- The paragraph on page 2, lines 11-15 is amended to describe “an additional useful treatment choice”
- The run on sentence on page 3, lines 4-19 has been corrected.

Applicant submits that the amendments obviate all § 112, first paragraph rejections raised.

In connection to the Objections to the Drawings identified by the Examiner in paragraph 1 of the Official Action, items a-e, the Specification has been amended as follows:

- On page 11, lines 17-25, the paragraph referring to Figure 7 is amended to include a reference to element 105.
- On page 15, lines 7-13, the paragraph referring to Figure 23 is amended to include references to elements 158 and 160-163.
- On page 15, lines 15-18, the paragraph referring to Figure 24 is amended to include a reference to element 167. Element 165 was discussed in the specification as originally filed.

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- On page 15, lines 20-24, the paragraph referring to Figure 25 is amended to include a reference to element 171.

Applicant submits that the above-identified amendments to the specification obviate all objections to the drawings raised by the Examiner.

Enclosed is one (1) Replacement Sheet including Figure 1, which is amended to delete element 1. An Annotated Drawing Sheet is included with this submission.

Claims 1, 2, 4, and 6 are amended. Claim 3 is cancelled. Claims 5 and 7-10 are original. Upon entry of the amendment, claims 1, 2 and 4-10 are pending in the application.

As amended, claim 1 recites:

An electrical stimulation device comprising:
a sensor for detecting a movement event of a body part,
an electrode for making electrical contact with an area of the body part, and
a controller coupled to the sensor and electrode for receiving a sensor signal indicating the movement event, and for outputting to the electrode a stimulation signal comprising a rise portion, a stimulation portion, an extension portion and a fall portion, and programmed to record a duration of use and a number of movement events during the duration of use.

As amended, claim 2 recites:

An electrical stimulation device for controlling the movement of a foot of a patient comprising:
a sensor for detecting a walking movement of a patient,
an electrode located to stimulate muscles which contract to lift said foot of the patient during walking,
a housing to be worn by a user of the device, a receiver on the housing for receiving wireless signals from a remote unit, and

a controller provided in the housing and coupled to the receiver for receiving stimulation data from the remote unit and storing the stimulation data in a stimulation file, and coupled to the sensor for receiving a sensor signal indicating the walking movement, and for generating a control signal using the stimulation file in response to the walking movement, and for outputting the control signal to the electrode to lift the foot during walking; and programmed to record in a log file a number of steps and duration of walking movements in a time period comprising one of an hour, a day or between a period of dates, and wherein the control signal comprises a rise portion, a stimulation portion, an extension portion and a fall portion for each walking movement.

As amended, claim 6 recites:

The device of claim 4 further including a computer removably coupled to the controller for downloading the stimulation file and log file, and for updating the stimulation file, and programmed to store data from the stimulation and log files in a database, and for outputting for display the stimulation data and the number of steps and duration of the walking movements in the time period.

Support for the claim amendments as set forth above is found in Figure 4 and, for example, at page 8, lines 1-5 and page 14, lines 6-10. Applicant also submits that the amendments to claim 1 and claim 6 obviate the Examiner's rejections raised in paragraphs 3 and 4, respectively.

Rejections under 35 USC §102

Claims 2, 4, 5-7 and 9 stand rejected in view of Haugland et al (US 2003/0144710). Applicant submits that amended claims distinguish the electrical stimulation system of the present application over the devices taught in Haugland as well as Nelson and the other references cited by the Examiner. None of the cited references disclose the extension portion or extension time in addition to the stimulation portion of the signal. The extension portion of the signal is intended to prevent the stimulation level from dropping as soon as the foot is

placed on the ground. The extension portion aspect of the signal also serves to maintain the posture of the ankle joint.

Additionally, amended claim 2 discloses a log file to record the number of steps and duration of walking movements in a time period selected from an hour, a day or between a period of dates. To contrast, Nelson discloses recording “the duration of the walk and number of steps over a preset distance” of 3 to 6 meters (i.e. how long and the number of steps it takes to walk a set distance of between 3 and 6 meters). This is not strictly the same as recording a number of steps and duration of walking movements in a time period comprising an hour, day or from a period of dates (i.e. how long a person walks and how many steps a person takes, not necessarily continuously, in a defined period of time). Nelson’s method only allows a step or stride profile to be established. Applicant’s method allows the physician to know more about the daily walking pattern of the patient to help prescribe a more suitable time schedule of walking exercise for each individual user.

Rejections under 35 USC §103

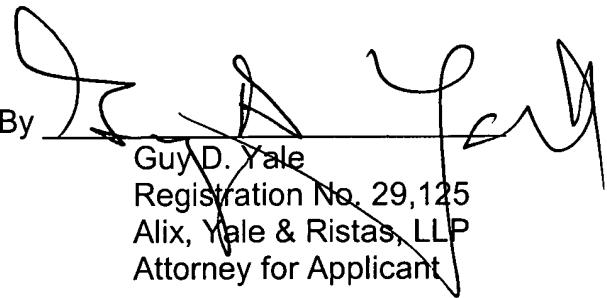
Claims 1, 3, 8 and 10 are rejected under §103 as unpatentable over the combination of Haugland and Nelson in further view of Levin or Sieracki et al. As discussed above in the context of claim 2, both Haugland and Nelson fail to disclose or suggest the element of a signal having a rise portion, a stimulation portion, an extension portion and a fall portion. Moreover, the combination of Haugland and Nelson in view of any of the other citations suffer from the same deficiency because neither Levin or Sieracki et al, alone or in combination, teach a signal having a rise portion, a stimulation portion, an extension portion and a fall portion. Thus the present claims cannot be obvious in view of any of the Examiner’s suggested combinations because none of the references teach or suggest every element of the electrical stimulation device as recited.

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For all the foregoing reasons, allowance of all pending claims is respectfully requested.

Respectfully submitted,

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Annotated Sheet

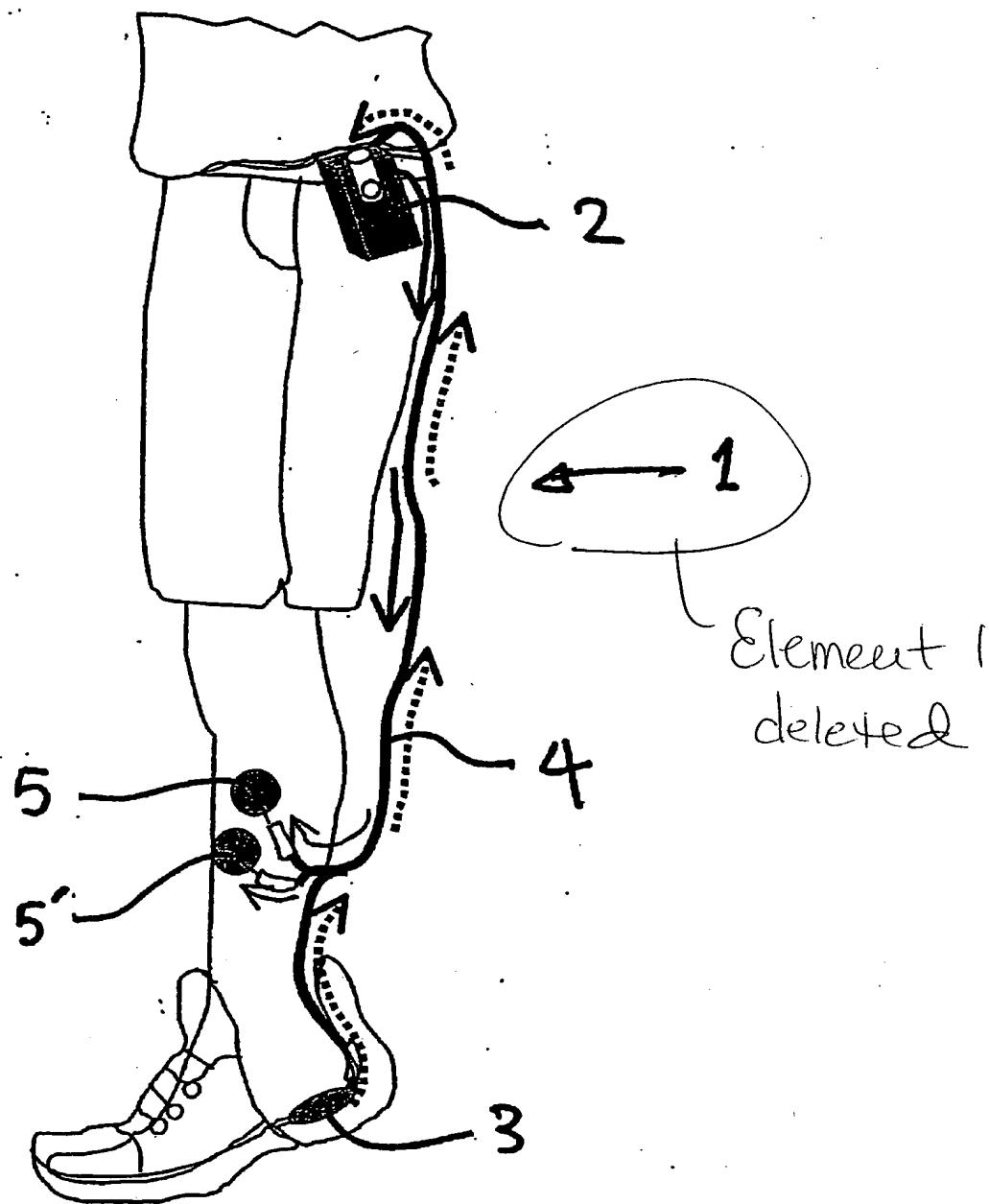


FIGURE 1